

begin

REEL
135
FOM IN, G.

FOMIN
DERYUGIN, A.; LOMONOSOV, A.; KOROL', Yu., zasluzhennyy master sporta; GUSEV, Ye; KARYAGIN, A.; ZINKEYEVA, G., master sporta; VINOGRADOV, A.; KHRISTOFOROV, G., master sporta; YUDIN, S.; FOMIN, G., master sporta.

Our inquiry. Za rul. 15 no.4:2-3 Ap '57.

(MLRA 10:6)

1. Nachal'nik otdela avtomotosporta Komiteta po fizicheskoy kul'ture i sportu pri Sovete Ministrov SSSR (for Deryugin).
 2. Predsedatel' Moskovskogo oblastnogo komiteta Dobrovol'nogo obshchestva sodeystviya armii, aviatsii i flotu (for Lomonosov).
 3. Inzhener-mekhanik Leningradskogo Avtomotokluba (for Gusev).
 4. Trener Dobrovol'nogo sportivnogo obshchestva "Trudovyye rezervy" (for Zinkeyeva).
 5. Nachal'nik Moskovskogo Avtomotokluba (for Vinogradov).
 6. Trener Tushinskogo Avtomotokluba Dobrovol'nogo obshchestva sodeystviya armii, aviatsii i flotu (for Khristoforov).
 7. Nachal'nik i starshiy trener komandy TsSK MO (for Yudin).
- (Motorcycle racing)

AUTHOR: Fomin, G., Master of Sports (Kaluga)

Sov/85-58-8-11/40

TITLE: Gerkules-3 Winch for Launching Gliders (Lebedka "Gerkules-3" dlya zapuska planerov)

PERIODICAL: Kryl'ya rodiny, 1958, Nr 8, pp 6-7 (USSR)

ABSTRACT: In 1953, the DOSAAF Central Committee began using the Nazarov automatic winch for mechanized launching of single and two-seater glider training planes. However, this winch was not capable of launching gliders to the altitudes necessary for soaring flights. The DOSAAF Central Committee has now purchased more than 100 Gerkules-3 winches of Czech make for aeroclubs and glider stations. At the present stage of glider development these winches are better suited than others for mass training purposes. They are capable of launching gliders weighing up to 500 kg. to an altitude of 500 - 600 m. A detailed description of the winch and its operation is given. There are 4 photographs and 1 diagram.

Card 1/1

PETROV, V.; FOMIN, G.; SHKLOVSKAYA, R.; IDEL'SON, L.; BAZHENOVA, A.

In memory of ~~Iakov~~ Grigor'evich Dillon; on the 10th anniversary of his death. Vest. rent. i rad. 37 no.2:82-83 Mr-Ap '62.

(DILLON, IAKOV GRIGOR'EVICH, d.1951)

(MIRA 15:4)

FOMIN, G.

Problems of construction and reconstruction in Moscow. Na stroi.
Ros. 3 no.8:12-16 Ag '62. (MIRA 15:12)

1. Zamestitel' nachal'nika Glavnogo arkhitekturno-planiro-
vochnogo upravleniya g. Moskvyy.
(Moscow--City planning)

3825 0

S/181/62/004/007/031/037
B178/B104

AUTHORS: Tolstoy, N. A., Osipov, B. S., and Fomin, G. A.

TITLE: Change in sign of the photo-emf of cuprous oxide

PERIODICAL: Fizika tverdogo tela, v. 4, no. 7, 1962, 1966-1967

TEXT: The change in sign of the photo-emf of Cu_2O was detected by using the pulsed capacitor method. The advantage of this method lies in the fact that the photo-emf can be regarded as resulting from a single excitation of the substance by single pulses in the absence of a residual excited state. The existence of a residual excitation is particularly marked at low temperatures. At room temperature, Cu_2O has a p-type photo-emf which decreases continuously with dropping temperature. An n-type photo-emf appears between -40 and -80°C and increases rapidly with decreasing temperature. At -180°C , the pulse of the n-type photo-emf is 10 to 20 times stronger than that of the p-type photo-emf, and 2 to 5 times stronger than the p-type pulse at room temperature. As the p-type pulse lasts longer, it is possible to observe both pulses at the

Card 1/2

Change in sign of the photo-emf ...

S/181/62/004/007/031/037
B178/B104

same time. The relation between the amplitudes of the p- and n-type photo-emf depends on the wavelength of the exciting light. At room temperature and in red or UV light only an n-type photo-emf exists.

ASSOCIATION: Gosudarstvennyy opticheskiy institut im. S. I. Vavilova
Leningrad (State Optical Institute imeni S. V. Vavilov,
Leningrad)

SUBMITTED: March 21, 1962

Card 2/2

FOMIN, G.A.

Linear methods for summing Fourier series. Mat. Sbor. 65 no.1:
144-152 S '64. (MIRA 17:11)

FOUO, C. I.

F. M. I., C. I. - "Significance of a Magnified X-Ray of the Chest in the Recognition of Primary Cancer and Suppurative Diseases of the Lungs." Sub 6 Jan 53, Central Inst for the Advanced Training of Physicians. (Dissertation for the Degree of Candidate in Medical Sciences).

SO: Vechernaya Moskva January-December 1952

FOMIN, G.B.

Significance of sharper photographs for clinical radiodiagnosis of cancer of the lungs. Klin.med. 31 no.3:24-28 Mr '53. (MLRA 6:5)

1. Rentgenologicheskiy otdel Moskovskogo oblastnogo nauchno-issledovatel'skogo klinicheskogo instituta imeni M.F. Vladimirovskogo.
(Lungs--Cancer) (Diagnosis, Radioscopic)

FOMIN, G.B., kandidat meditsinskikh nauk (Moskva)

New possibilities for clinical roentgenodiagnosis in pulmonary abscess.
Klin.med. 34 no.3:47-53 Mr '56 (MLBA 10:1)

1. Iz ^orentgenologicheskogo otdela (zav. - dotsent V.I.Petrov)
Moskovskogo oblastnogo nauchno-issledovatel'skogo klinicheskogo
instituta imeni M.F.Vladimirovskogo (dir. kandidat meditsinskikh nauk
P.M.Leonenko)

(LUNGS, abscess,
diag., x-ray (Rus))

(ABSCESS,
lungs, diag., x-ray (Rus))

FOMIN, G.B., kand.med.nauk

X-ray diagnosis of congenital duodenal obstruction in nursing
infants [with summary in English]. *Pediatrics* 36 no.5:50-55
My '58 (MIRA 11:6)

1. Iz rentgenologicheskogo otdela (zav.-dotsent V.I. Petrov)
i detskoy kliniki (zav. - prof. M.I. Olevskiy) Moskovskogo ob-
lastnogo nauchno-issledovatel'skogo klinicheskogo instituta !
M.F. Vladimirovskogo (dir. - kand.med.nauk P.M. Leonenko).
(DUODENUM--OBSTRUCTION)

FOMIN, G.B., kand.med.nauk (Moskva, D-80, Volokolamskoe shosse, d.14-b,
kv.210)

Possibilities of roentgen diagnosis of varicose veins of the
esophagus and stomach in hepato-lienal syndrome in children.
Vest. rent. 1 rad. 35 no. 6:34-37 N-D '60. (MIRA 14:2)

1. Iz rentgeno-radiologicheskogo otdela (zav. - kand.med.nauk
V.I.Petrov) Moskovskogo oblastnogo nauchno-issledovatel'skogo
klinicheskogo instituta imeni M.F. Vladimirovskogo (direktor -
kand.med.nauk P.M. Leonenko).

(ESOPHAGUS—BLOOD SUPPLY) (SPLEEN—DISEASES)
(LIVER—DISEASES)

FOMIN, G.B.

Changes in the bone structure in certain children's diseases;
1st report on leukemia. Vop. klin. pat. no.2:236-243 '61
(MIRA 16:12)

1. Iz rentgeno-radiologicheskogo otdela (zav. - starshiy
nauchnyy sotrudnik V.I.Petrov) i detskoy kliniki (zav. -prof.
M.I.Olevskiy) Moskovskogo oblastnogo nauchno-issledovatel'sko-
go intituta imeni Vladimirovskogo.

FOMIN, G.B., doktor med. nauk

X-ray diagnosis of staphylococcal metastatic pneumonia in
children. Vest. rent. i rad. 40 no.6:25-28 N-D '65.

(MIRA 19:1)

1. Rentgeno-radiologicheskii otdel (zav. - prof. V.I. Petrov)
Moskovskogo oblastnogo nauchno-issledovatel'skogo klinicheskogo
instituta imeni M.F. Vladimirovskogo, Moskva.

LEONENKO, P.M., kand. med. nauk, zaslushennyy vrach P.M.F.; FOMIN, G.P.,
doktor med. nauk

Professor Vladimir Ivanovich Petrov, 1905?- ; on his 60th birthday.
Vest. rent. i rad. 40 no.6:70-71 N-P '65. (MIRA 19:1)

1. Direktor Moskovskogo oblastnogo nauchno-issledovatel'skogo
klinicheskogo instituta imeni M.F. Vladimirovskogo (for Leonenko).
2. Zamestitel' predsedatelya Moskovskogo oblastnogo nauchnogo
obshchestva rentgenologov i radiologov (for Fomin).

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27134
S/100/60/000/012/004/009
D207/D303

AUTHOR: Fomin, G.D., Engineer

TITLE: Cutting frozen ground with a vibratory wedge
reinforced roller

PERIODICAL: Mekhanizatsiya stroitel'stva, no. 12, 1960, 8

TEXT: During erection of earth dams in winter it is impossible to use the hydromechanization method due to freeze-up. This happened when building the Stalingrad hydraulic system, where a surface of 20,000 m² froze up to a depth of 0.2 - 0.4 m. Ice layers alternated with layers of frozen fine-grained sand. Attempts to loosen and remove the above with bulldozers, Д-157 (D-157) and six-bucket scrapers were unsuccessful. Applying a cutting ram to a tractor was ineffective. The author together with N.N. Belanovskiy solved the problem as follows: A vibro-roller, type ПБК-25 (PVK-25) designed by A.A. Smolyar and V.I. Somov [Abstractor's note: Design of vibroroller, PVK-25 described in Mekhanizatsiya stroitel'stva,

Card 1/3

Cutting frozen ground with ...

27134
S/100/60/000/012/004/009
D207/D303

nc. 3, 1959] was modified. Changes consisted of welding wedges, with an angle of 18° on their edge, in a staggered pattern on surface of rollers. The distance between adjacent wedges was equal to double width of latter. The frame of the vibro-roller was enlarged in order to ensure a free passage of wedges. During the motion of the machine over frozen ground with a disengaged vibrator, only light marks of wedges were left. Switching-on a vibrator produced an immediate penetration of wedges into the frozen ground, and formation of cracks between the adjacent indentations. Slewing of rollers caused turning over of individual lumps of frozen ground. At the beginning, the depth of loosened layer amounted to 15 cm. For the above it was sufficient to have 5 - 7 passes of the tractor C-80 (S-80) vibroroller at first speed. The bulldozer then removed the loosened ground beyond the limits of the dam area. A check was made on different procedures of work: travelling of the vibroroller along a closed contour with gradual displacement of passes; shuttle-like displacement of the vibro-roller; shuttle motion of the vibro-roller lengthwise and crosswise over the area;

Card 2/3

Cutting frozen ground with ...

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D207/D303

short duration stoppages of the tractor with the vibrator being switched-on. The third procedure was the most effective, and was thus adopted during operations. Results of the work allow the recommendation of the above as a high efficiency unit for loosening frozen ground over large areas. There are 1 figure and 1 Soviet-bloc reference.

X

Card 3/3

GOL'DIN, A.L., red.; ZHILENKOV, V.N., red.; IZMAYLOVA, R.A., red.;
KRAYEV, G.A., red.; KRICHEVSKIY, I.Ye., red.; KYAKK, V.A.,
red.; SOKOLOV, I.B., red.; SUDAKOV, V.B., red.; FOMIN, G.D.,
red.; SHUL'MAN, S.G., red.; ABRAMSON, L.S., tekhn. red.

[Collection of reports on hydraulic engineering; the third
engineering conference of young scientists] Sbornik dokladov
po gidrotekhnike; tret'ia nauchno-tekhnicheskaya konferentsiya
molodykh nauchnykh rabotnikov. Moskva, Gosenergoizdat, 1961.
183 p. (MIRA 17:2)

1. Leningrad. Nauchno-issledovatel'skiy institut gidrotekh-
niki.

ARABADZHIAN, I.R., red.; IZMAYLOVA, R.A., red.; KRAYEV, G.A., red.
[deceased]; KRICHEVSKIY, I.Ye., red.; SOKOLOV, I.S., red.;
SOLNYSHKOV, V.A., red.; STREL'TSOVA, T.D., red.; FOMIN,
G.D., red.; SHUL'MAN, S.G., red.; ABRAMSON, L.S., tekhn.ref.

[Collection of papers on hydraulic engineering] Sbornik dok-
ladov po gidrotekhnike. Moskva, Gosenergoizdat, 1962. 284 p.
(MIRA 17:3)

1. Nauchno-tekhnicheskaya konferentsiya molodykh nauchnykh
rabotnikov. 4th, 1962.

...ment of hydraulic fluid beneath ice crusts. Sbor. dokl.
... VNIIG no.4:232-240 ... (MIPA 18:7)

LEVENETS, N.P.; SAMARIN, A.M.; SEMIKIN, I.D.; KAZAKOV, V.E.; BEMBINEK, Ye .;
PANYUKHNO, L.G.; SVINOLOBOV, N.P.; AVERIN, S.I.; SMIRNOV, V.M.;
ZELENSKIY, V.D.; LAYKO, B.G.; TISHCHENKO, O.I.; OKHRIMOVICH, B.F.;
DANILOV, A.M.; TISHKOV, Yu.Ya.; PANOV, M.A.; MARKELOV, A.I.;
PETROV, A.K.; VASILEVSKIY, P.A.; PASYUK, K.I.; NESTEROV, V.I.;
KHRUSTAL'KOV, L.A.; GLAZKOV, V.S.; MAKAGON, V.G.; FOMIN, G.G.;
TRISHCHENKO, V.D.; KORZH, V.P.; SUYAROV, D.I.; ARSEYEV, A.V.;
PAVLYUCHENKO, A.A.; ZHADAYEV, V.G.; KONDORSKIY, R.I.; MOROZOVA,
I.A.; KOCHETOV, V.V.; PRUZHINER, V.L.; MALEVICH, I.A.;
MALIOVANOV, D.I.; ZAKOVRYASHIN, I.I.; NOVSKIY, I.S.; NOVIKOVA,
V.P.; GRISHIN, K.N.; MOSKOVSKAYA, M.L.; KORNEYEV, B.M.

Inventions. Met. i gornorud. prom. no.3:75-76 My-Je '64.
(MIRA 17:10)

82855

3/112/60/000/008/004/012

13,4000

Translation from: Referativnyy zhurnal. Elektrotehnika, 1960, No. 8, pp. 280-281, # 4.7309

AUTHOR: Fomin, G.I.

TITLE: Balancing-Transmitter¹ With LF² Telemetry System

PERIODICAL: Tr. Vses. n.-i. in-ta elektroenerg., 1958, No. 7, pp. 202-207

TEXT: TsNIEL has developed a new balancing-transmitter for a l-f telemetry system which represents a modernized version of the existing "ГЧБ-1" ²⁸ (GChB-1) ⁸ transmitter. The author describes the operation principle of the GChB-1 transmitter which is a static automatic regulator of a-c frequencies. The signal to be measured (angle of loop rotation) is transformed, with the aid of an induction converter and rectifier, into d-c voltage, which is compared with the output voltage of a frequency meter. The difference signal is amplified by an unbalance amplifier and enters the control winding of a saturable reactor, controlled by a generator of alternating voltage of variable frequency. The output signal of the generator is transmitted to the frequency meter input. The output frequency of the generator is used as a gage of the angle of loop rotation of the induction converter. When the measured magnitude changes from 0 to the

Card 1/2

82855

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Balancing-Transmitter With LF Telemetry System

maximum, the frequency changes from 44 to 27 cps. In the new transmitter the most complex unit has been eliminated, i.e. the electronic unbalance amplifier containing 4 transistors. Owing to the fact that the power of the unbalance signal is rather low and is not able to ensure a direct control of the saturable reactor at low values of the coefficient of the "static state" (statism), the problem of the utmost value of the coefficient of "statism" was reconsidered. It was found that the coefficient of "statism" can be considerably increased while the given accuracy of conversion is preserved. The author describes the principal circuit of the new balancing-transmitter (without induction converter and power supply unit) and gives the basic characteristics: the output frequency depending on the induction converter voltage; the additional error from line voltage changes by $\pm 15\%$, relative to the frequency variation range does not exceed 0.88% . The error from temperature changes of the surrounding air in the range of $\pm 20^\circ$ does not amount to more than 0.85% , which has been achieved by using a resistor with a low temperature coefficient. The frequency setting time for a change in the measured magnitude from 0 to half the maximum value is ≤ 1 second. There are 3 figures and 1 reference.

V.A.A.

Translator's note: This is the full translation of the original Russian abstract.

Card 2/2

FOMIN, G.M., inzhener.

Housing construction experience of the Central Machine
Construction Trust. Biul.stroi.tekh. 9 no.2:12-15 Ja '52.
(MIRA 9:4)

1.Trest TSentrestandkestrey.
(Building)

FOMIN/GPNC

600

1. FOMIN, G. M. ; Inzh.

2a. USSR (00)

4. Apartment Houses; Plastering

7. Organizing plastering work in building apartment houses
Mol. Stroi. Tekh. 9 no. 7 April 1952
Trest Tsentrastankostroy

9. Monthly List of Russian Accession. Library of Congress, August, 1952.
UNCLASSIFIED.

FOMIN, G. M.

Casting panels in molds. Stroitel' no.9:5-7 '58.
(MIRA 13:3)

1. Glavnyy inzhener Upravleniya proizvodstvennykh predpriyatiy
Glavmosstroya.
(Moscow--Concrete slabs)

FOMIN, G.M.

Device for forcing rods through draw dies. Metallurg 4 no.3:33-34
Mr '59. (MIRA 12:4)

1. Glavnyy inzhener Magnitogorskogo kalibrovochnogo zavoda.
(Drawing (Metalwork)--Equipment and supplies)

FURMANOV, Boris Moiseyevich; SHIRYAYEV, Boris Mikhaylovich; FOMIN, G.M.
redaktor; NADKINSKAYA, A.A., tekhnicheskiiy redaktor.

[Mine telephone system] Shakhtnaya telefonnaya svyaz'. Moskva,
Ugletekhizdat, 1955. 151 p. (MLRA 8:9)
(Mine communication)

FOMIN, G.M.; KHROMOV, P.I.; RYABCHIKOVA, G.A.; REVZINA, F.S.
YEGOROV, V.D.

New wire rope construction for skip hoisters on blast
furnaces of the Magnitogorsk Metallurgical Combine. Metallurg
6 no.10:31-33 0 '61. (MIRA 14:9)

1. Magnitogorskiy kalibrovchnyy zavod i Nauchno-issledovatel'-
skiy institut metiznoy promyshlennosti.
(Magnitogorsk--Blast furnaces--Equipment and supplies)
(Wire rope)

ASTAKHOV, K.F.; FOMIN, G.M.

Equipment for high-frequency communication with ingot-crane operators in the roughing shop of a metallurgical plant. Avtom.i prib. no.4:57-60 O-D '62. (MIRA 16:1)

1. Luganskiy filial Instituta avtomatiki Luganskogo soveta narodnogo khozyaystva.

(Communication in management)

FOMIN, G.M.; LAPSHIN, L.Ya.; TARNAVSKIY, A.L.; KAGAN, I.S.; CHERNIKHOV, V.S.

Increasing the diameter of steel rods for wire drawing. Metallurg
8 no.8:24-26 Ag '63. (MIRA 16:10)

1. Magnitogorskiy kalibrovchnyy zavod i Nauchno-issledovatel'skiy
institut metiznoy promyshlennosti (for Fomin, Lapshin, Tarnavskiy).
2. Dnepropetrovskiy metallurgicheskiy institut (for Kagan, Chernikhov).

FOMIN, G.M., Inzh.

Cutting speed of straight shovels. Stroil. i dor. mash. 10 no.1:
17-19 Ja '65 (MIRA 18:2)

		PROCESS AND PROPERTIES INDEX	
<p><i>pc</i></p>		<p>Silicomanganese spring steel and its heat treatment. G. N. Pomjn and S. A. Berner. <i>Kachestvennaya Stal</i> 6, No. 1, 34-9(1930)(in Russian); <i>Met. Abstracts</i> (in <i>Metals & Alloys</i>) 7, 494.—Investigation was conducted to det. the influence of variation in compn. from a standard on phys. properties of the metal. Standard analysis was: C 0.50-0.60, Mn 0.45-0.80, S 0.35, P 0.45, Si 1.3-1.8%. Complete data on phys. testing are furnished. All phys. requirements are met when C content is higher than 0.60%, under 0.50% the results are unsatisfactory. With Si at the lower limit of 1.30% and Mn below it, 0.45%, steel is on the margin of desired phys. qualities. When Si was increased above its upper limit, 2.05%, up to 2.2%</p>	
<p>ys. properties were fully met, but the material was somewhat hard. 900-20° can be recommended as quench- ing temp. in production.</p>		<p>M. W. R.</p>	
<p>ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION</p>		<p>SELECTED ONLY</p>	
<p>1930S 76</p>		<p>1930S 76</p>	

PROCESSES AND PROPERTIES INDEX																									
<p>Steel for automobile frames and its heat treatment G. N. Fomin and S. A. Berner. <i>Kachestvennyi Stal</i> 4, No. 1, 1964 (1963); <i>Chem. Zvest.</i> 1964, 1, 4497.—In- vestigations are reported of the causes of accidental waste (faulty pieces) in the manuf. of automobile frames from a steel contg. 0.24-0.34% C, 1.25-1.5% Mn, 0.25% Si, ≤ 0.04% P, and ≤ 0.04% S. Mech. properties were tested and their relation to previous heat treatment are held to be important causes of waste. M. G. Moore</p>																									
<p>ASS-5LA METALLURGICAL LITERATURE CLASSIFICATION</p>																									

FOMIN, G. N., Engr. Cand. Tech. Sci.

Dissertation: "Aging of Plate Steel for Extrusion." Moscow Order of the Labor Red
Banner Inst of Steel imeni I. V. Stalin, 3 Jun 47.

SO: Vechernnyaya Moskva, Jun, 1947 (Project #17836)

FORIN, G. H.

Livshits, B. G. and Forin, G. H. - "Aging of sheet steel for deep drawing",
Sbornik (Mosk. in-t stali im Stalina), 27, 1949, p. 86-111, - Bibliog: 5 items.

SO: U-2042, 11 March 53, (Letopis 'Zhurnal 'nykh Statey, No. 8, 1949).

FOMIN, G.N.; DOBRZHANSKIY, P.I.

Large-panel walls constructed from gypsum concrete. Stroi.prom.
32 no.1:15-22 Ja '54. (MLRA 7:2)

(Walls) (Concrete)

FOMIN, G.H.

Prefabricating series of elements for large-panel apartment houses.
Gor. khoz. Mosk. 32 no.6:9-12 Je '58. (MIRA 11:7)

1. Glavnyy inzhener Upravleniya proizvodstvennykh predpriyatiy
Glavmosstroya.
(Moscow--Apartment houses) (Concrete blocks)

LAGUTENKO, V.P., inzh., Geroy Sotsialisticheskogo Truda; FOMIN, G.N.,
inzh.; TESLER, P.A., kand.tekhn.nauk, nauchnyy red.; TYULENEVA,
L.M., red.izd-va; RYAZANOV, P.Ye., tekhn.red.

[Large-panel houses of thin-walled units; introduction of the
first experimental house] Krupnopanle'nye doma iz tonko-
stennykh konstruksii; iz opyte vozvedeniia pervogo eksperi-
mental'nogo doma. Moskva, Gos.izd-vo lit-ry po stroit., arkhit.
i stroit.materialam, 1960. 103 p. (MIRA 14:4)

(Precast concrete construction)
(Apartment houses)

FOMIN, G.N., inzh.; CHUBAREV, N.A., inzh.

Increasing the durability of the turning gear mechanism of universal excavators. Stroi. i dor. mash. 10 no.10:25-26 0 '65. (MIRA 18:10)

CHUGUNOV, Anatoliy Mikhaylovich; SVICHINNIKOV, M.I., inzh., retsen-
zent; FOMIN, G.P., inzh., red.; DUGINA, N.A., tekhn. red.

[Fitting and ganging operations] Slesarno-lekal'noe master-
stvo. Moskva, Mashgiz, 1961. 46 p. (Biblioteka rabochego-
mashinostroitelia. Seriya: Peredovaya tekhnika - osnova kom-
munisticheskogo truda, no.10) (MIRA 15:7)

1. Zamestitel' nachal'nika instrumental'nogo tsekha Ural'skogo
zavoda tyazhelogo mashinostroyeniya (for Chugunov).
(Machine-shop practice)

AUTHORS: Yagodin, G. A., Pomin, G. S., Nisel'son, L. A. SOV/7 -3-8-42/48

TITLE: The Determination of the Relative Volatility of the Products of the Interaction Between $ZrCl_4$, $HfCl_4$, and $POCl_3$ (Opredeleniye otnositel'noy letuchesti produktov vzaimodeystviya $ZrCl_4$ i $HfCl_4$ s $POCl_3$)

PERIODICAL: Zhurnal neorganicheskoy khimii, 1958, Vol. 3, Nr 8, pp. 1971-1972 (USSR)

ABSTRACT: In the present study the amount of the relative volatility of the products of the interaction between $ZrCl_4$ and $HfCl_4$ with $POCl_3$ was determined by means of a re-circulating apparatus. The hafnium content in the samples was determined by radioactive Hf^{181} . The basic materials were purified by means of the sublimation method. The hafnium content in the basic material HfO_2 amounts to 0,8 per cent. The relative volatility (α) of the materials investigated amounts to $1,160 \pm 0,005$ at the pressure of one atmosphere. There are 1 figure, 1 table, and 3 references, 1 of which is

Card 1/2

SOV/76-3-2-42/48

The Determination of the Relative Volatility of the Products of the Interaction Between $ZrCl_4$, $HfCl_4$, and $POCl_3$

Soviet.

ASSOCIATION: Moskovskiy khimiko-tekhnologicheskij institut im. D. I. Mendeleyeva (Chemical-Technological Institute imeni D. I. Mendeleyev, Moscow) Moskovskiy institut tsvetnykh metallov i zolota im. M. I. Kalinina (Institute for Non-Ferrous Metals and Gold imeni M. I. Kalinin, Moscow)

SUBMITTED: December 12, 1957

Card 2/2

IGNAT'YEV, B. G.; NEZHEVENKO, L. V.; FOLTORATSKIY, N. I.; FOMIN, G. S.; YAKUTOVICH, M. V.

"Fabrication of large Gabarit makes from refractory carbides."

paper submitted but not presented at Intl Powder Metallurgy Conf, New York City,
14-17 June 1965.

ACC NR: AP6021526

SOURCE CODE: UR/0089/66/020/006/0489/0494

AUTHOR: Ignat'yev, B. G.; Nezhevenko, L. B.; Kovalev, A. V.;
Poltoratskiy, N. I.; Fomin, G. S.; Yakutovich, M. V.

ORG: none

TITLE: Production of thin plate from refractory carbides

SOURCE: Atomnaya energiya, v. 20, no. 6, 1966, 489-494

TOPIC TAGS: zirconium, zirconium carbide, ~~powder~~ carbide, ~~powder~~ metal
~~carbide~~ extrusion, ~~powder~~ ~~carbide~~ rolling, ~~carbide~~ thin plate, ~~carbide~~
~~rolling~~ ~~thin plate~~ ~~density~~

ABSTRACT: Two methods of producing dense, thin plate from zirconium-carbide powder have been investigated: 1) hot extrusion with subsequent high-temperature sintering with various surface-active additives; 2) rolling zirconium-carbide powder into plate and subsequent sintering. A mixture of the powders of zirconium-carbide and metallic zirconium (15 wt.%) plasticized with a 3% solution of rubber in 3-chlorethylene was extruded under a specific pressure of 1.5—3.0 t/cm² into plate which was sintered at 2100—2500C for up to 3 hr. Tests showed that the powder fineness, specific extrusion pressure, and temperature and duration of sintering had only a slight effect on the final product

Card 1/2

UDC: 621.762.546.261

L. 35860-66

ACC NR: AP6021526

density, which averaged from 5.02 to 5.82 g/cm³. Appreciably better results were obtained in extruding and sintering plate from the same mixtures with the addition of 0.3—1.5 wt.% of NiCO₃ or NiC₂O₄ activating salts. For example, the oxygen content in both sintered and unsintered specimens with activating additives was 3—4 times lower than in specimens without additives (0.05—0.09 and 0.25%, respectively). The highest density plate (about 6.3 g/cm³—94% of the theoretical) was obtained with the addition of 0.3 wt.% NiCO₃ or NiC₂O₄ to a powder with a specific surface of 8 m²/g, which was extruded and subsequently sintered at 2400—2500C. Plate rolled from granulated powder with a particle size of 100—280 μ, prepared from a powder mixture plasticized with a 3% solution of 1.0 wt.% powdered rubber in benzine, was sintered at a temperature of up to 2000C in a vacuum of 10⁻³ mm Hg and at higher temperatures (2100—2500C) in an argon atmosphere at a pressure of 300—350 mm Hg. It was found that the density of the sintered plate increased with increasing powder fineness and sintering temperature. The best results were obtained with powder ground for 96 hr (a specific surface of 8 m²/g). The 1 mm-thick plate rolled from this powder, after sintering at a temperature of 2300C or higher, had a density of 6.5 g/cm³ (97% of the theoretical). Elimination of the need for activating additives and higher density of the final product are definite advantages of the second method of producing thin plate from zirconium-carbide powder. Orig. art. has 2 figures and 8 tables. [MS]

SUB CODE: 11, 13/ SUBM DATE: 29Jan66/ ORIG REF: 007/
OTH REF: 003/ ATD PRESS: 5037
Card 2/2 ///

SOV/137 58-8-17311

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 8, p 159 (USSR)

AUTHOR: Fomin, G.T.

TITLE: Employment of Heating Furnaces for High speed Heating of Steel Components Prior to Their Quenching (Uskorennyy nagrev stal'nykh izdeliy pod zakalku v nagrevatel'nykh pechakh)

PERIODICAL: Sb. nauchn. tr. Zhdanovsk. metallurg. in-t, 1957, Nr 4, pp 169-194

ABSTRACT: The information presented below was obtained as a result of investigations carried out in order to evaluate the possibilities of employing heating furnaces (HF) for high-speed heating (HSH) of specimens of U7 steel (in the form of a rod 40 mm in diameter) prior to their quenching, as well as through an analysis of works of other authors on HSH of specimens ranging from 100 to 900 mm in diameter made of steels 9Kh and 50G. The following facts were established: HSH of steel components in HF offers the same advantages as high-frequency induction heating. Temperature drops between the surface and the core of specimens 40 mm in diameter or more occurring during their HSH in HF, are approximately one-half as great as the

Card 1/2

SOV/137-58-8-17311

Employment of Heating Furnaces for High-speed Heating of Steel (cont.)

temperature drops arising during oil quenching, and one-third as great as the temperature drops occurring during quenching in water. Hardening procedures employing HSH in HF make it possible to control the depth of the hardened layer and to preserve the original structure of the core. Heating of large components made of carbon and low-carbon steels with poor deep-tempering properties throughout their cross section until austenitic stage is reached is not advisable, both in theory and in practice. Hardening in conjunction with HSH and austenite transformation of the surface layer only is recommended for components operating under friction in connection with dynamic loads. Bibliography: 22 references.

A.P.

1. Steel--Heating
2. Furnaces--Performance

Card 2/2

FCMIN. G. T.

Dr. Lygov, D.A., Candidate of Technical Sciences

at the Scientific and Technical Conference on the Improvement of the Wear Resistance and Service Life of Machines (Tretiya Kievskaya nauchno-tekhnicheskaya konferentsiya po povysheniyu iznosostoykosti i stroka sluzhby mashin)

The conference was organized by the Ministry of Mechanical Engineering Industry) and by the Institute of Mechanics of Building Structures, Ac.Sc. Ukrainian SSR (Institut stroitel'noy mekhaniki AN USSR). 450 delegates representing the major institutions of the Ac.Sc. USSR and of the Ukrainian SSR, the specialized research agencies and the large Soviet plants heard and discussed 90 papers devoted to the study of the mechanism of disintegration of surface layers in machine components and to new methods of improving the wear life of components.

In a paper by Academician S.V. Serensen, "The Problem Related to Wear and Fatigue", a survey of Russian and foreign studies was given with emphasis on fatigue failures caused by local wear, both as a result of the mechanical consequences due to

Scientific and Technical Conference in the Field of
Wear Resistance and Service Life of Machines

material wear and the formation of films on the surface
as a result of a change in the physical and chemical
of contact surfaces.

A. B. Gvozina, Corresponding Member of the USSR Academy of Sciences,
a paper entitled "The Complex Method of Analysis of Components
Working Under the Conditions of Rolling Friction" presented a
method which includes the combined use of electron microscopy,
X-ray diffraction and spectroscopic analyses to judge the con-
dition of the surface layers in association with wear tests and
static mechanical tests under tri-axial non-uniform compression
at different temperatures. It is claimed that with the help of
this method, the relation between the contact endurance strength
of steel and the factors defining the condition of the surface
can be established.

In a paper "On Temperature Measuring Methods in the Friction
Process between Solid Bodies" by S. A. Sukhov, Candidate of
Technical Sciences, a method for measuring the temperature
gradients in the immediate vicinity of the friction surfaces
with the help of a natural thermocouple was presented. Both
sliding bodies (pin and ring) are made of the same material, but
the pin end face is covered with a thin layer of another metal.

... and Technical Conference in the field of
... Wear Resistance and Service Life of Machines

... the natural thermocouple of ...
... the sliding surface and the other is the bond between the
... face and the coating metal.
Great interest was aroused by the paper "The Variation of Wear
Resistance of Certain Anti-friction Alloys under Nuclear Radiation"
by B.L. Slin'ko. Precipitation-hardening alloys (beryllium copper
C2 and nickel silicon bronze Bp. KH 1-3) have their strength and
wear resistance increased by nuclear radiation. Alloys change
their properties mainly as a result of phase transformations and
having a higher re-crystallisation temperature change their
properties insignificantly.
In a paper "Foundations of the Cavitation-erosion Failure of
Ferrous Alloys", I.N. Bogachev, Doctor of Technical Sciences, and
B.I. Mints, Candidate of Technical Sciences, generalised the
studies of the effect of the chemical and phase composition of
iron carbon alloys on their cavitation erosion resistance.
Increasing the carbon content from 0.025 to 1.2% improves the
erosion resistance. The effect of alloying is due solely to the
metallographic structure obtained. A pronounced improvement in
erosion resistance is obtained in spheroidal graphite cast iron.

00000/8

The Third Scientific and Technical Conference
 on the Problem of the Wear Resistance and Service Life of Machines

by alloying with 1% nickel and 0.3% molybdenum. Engineer L.A. Chatynyan in his paper "Investigation of the Wear Resistance of Nickel Alloys under Dry Friction at Elevated Temperatures" reported the results of his test which showed nickel alloys to have the best wear resistance at high temperatures, whilst the initial hardness is of little consequence. The optimum composition of a new alloy with a high wear resistance at 400 °C is given, whilst high-speed steel and ordinary chromium steels have little wear resistance under dry friction at high temperatures. V.P. Grechin, Candidate of Technical Sciences, concluded in his paper "The Heat Resistance of Cast Iron as the Main Factor in its Wear Resistance under Sliding Friction" that the hardness of cast iron at high temperatures (up to 850 °C) determines its wear resistance. Based on numerous studies of various cast irons, recommendations for alloying and for the application of cast irons under different conditions were given. It was noted by N.I. Kovalenko, Candidate of Technical Sciences, in his paper "The Wear Resistance of Wire Ropes" that the rubbing down of a wire rope is caused by an abrasive medium and its failure occurs before fatigue sets in. The author recommended

... and Technical Conference in Leningrad on the Wear Resistance and Service Life of Machines

... of anti-friction metals such as ...
... upon steel pulleys. In unlubricated operation, such
... increase the wear life of wire ropes by a factor of 2-3.
... Frumin, Candidate of Technical Sciences, in his paper
"Alloys for Wear-resistant Hard Facing Deposits", stated the
theoretical basis and methods of alloying to obtain the desired
results and surveyed the fields of application of different
methods of deposition on wearing components.

In his paper, "Electric Slag Method of Hard Facing for Wear
Resistance", I.K. Pokhodnya, Candidate of Technical Sciences,
suggested the electric slag process for hard facing of different
components and concluded that this method is appropriate when
large quantities of metal have to be deposited or when large
numbers of components require treatment.

N.Y. Simonenko, Engineer, suggested in his paper "The Electrolytic
Diffusion Method of Making Bi-metal Components" a novel method
of manufacturing copper base alloys. The alloying proceeds at a
temperature much below the fusion temperature of copper. Great
economies are achieved in labour cost and in scarce metals. Small
scale and automatic production procedures can be applied. Service

...All-Union Scientific and Technical Conference in Kiev on the
...of the Wear Resistance and Service Life of Machines

Tests have confirmed reliable operation of bi-metal components
under different conditions.

In a paper "Electric Spark Hardening of Machine Components"
S.S. Astaf'yev, Candidate of Technical Sciences, reported on a
novel electric spark hardening process. The surface of the
steel is alloyed with the electrode metal, as a result of instan-
taneous heat impulses occurring in rapid succession during spark
discharges. A special treatment head makes high output possible.
The wear resistance of machine components is said to increase
2-6 times at room temperatures and 4-5 times at elevated tempera-
tures.

...on Friction Materials and Coatings, 1.10.

In a paper "New Anti-Friction Materials" Al'shits reported on work designed to evolve novel substitutes for babbitt and high-tin-content bronze alloys. The following have given good results: a) Moulded timber materials and plastics based on phenolic and other resins with different fillers (cord and cotton fibres and others), in conjunction with water lubrication. b) Metallised graphite, nylon and others for elevated temperatures. c) Graphite-loaded materials and compositions of resin and graphite for working in corrosive media.

Scientific and Technical Conference in Kiev on the
Wear Resistance and Service Life of Machines

Improvement in Wear Resistance and Service Life of Machines with Large Transverse Cross-sections by the Method of Surface Quenching and Accelerated Heating in Heat Treatment Furnaces was the subject of G.T. Fomin, Candidate of Technical Sciences, who reported that accelerated heating of steel components to achieve transition into an austenitic state for the surface layer alone makes it possible to intensify the heat treatment of components with a cross-section exceeding 40 mm. The depth of the quenched layer can be controlled without modifying the structure of the core, so achieving the best combination of wear resistance and impact strength.

N.B. Dombrovskaya, Doctor of Chemical Sciences, and Iu.M. Vinogradov, in a paper "The Improvement of the Anti-friction Properties of Metals by Means of Thermo-Chemical Surface Treatments", pointed out that, alongside nitriding and phosphating, steels can also be improved in their anti-friction properties by enrichment with chloride or sulphide on their surface. The latter methods mainly improve the anti-seizure properties, whilst the former improve wear resistance. Sulphiding can be achieved in solid, liquid and gaseous media.

The Third Scientific and Technical Conference in Kiev on the
Topic of the Wear Resistance and Service Life of Machines
Chloriding, in a gaseous medium at a temperature of about 240 °C

FOMIN, G.T., kand.tekhn.nauk, dotsent

Mechanism and kinetics of pearlite to austenite transformation
at high rates of heating. Izv.vys.ucheb.zav.; chern.met. no.6:
131-139 Je '58. (MIRA 12:8)

1. Zhdanovskiy metallurgicheskiy institut. Rekomendovano
kafedroy metallovedeniya i termooobrabotki Zhdanovskogo
metallurgicheskogo instituta.
(Steel--Heat treatment) (Metallography)

AUTHOR:

Fomin, G.T.

32-1-23/55

TITLE:

On the Methods of Investigating the Transformation Mechanism of Perlite Into Austenite in the Case of Increased or High Heating Velocity (O metodakh izucheniya mekhanizma prevrashcheniya perlita v austenit pri povyshennykh i vysokikh skorostyakh nagreva).

PERIODICAL:

Zavodskaya Laboratoriya, 1958, Vol. 24, Nr 1, pp. 56-57 (USSR)

ABSTRACT:

The new method recommended in this paper is based upon the property of steel to shrink in the case of polymorphous transformations, and, vice versa, to expand when cementite is transformed into austenite. As these transformations do not take place simultaneously, and as they take place at different temperatures, it is possible to describe both phenomena within one process. It is said here that in the case of a rapid heating of steel the polymorphous transformation of perlite-ferrite into austenite having a low content of carbon takes place first, and that only after this process is completed cementite is transformed into austenite. In the experiment described in this paper the dilatometric and magnetometric

Card 1/2

On the Methods of Investigating the Transformation
Mechanism of Perlite Into Austenite in the Case of
Increased or High Heating Velocity

32-1-23/55

curves were recorded simultaneously on a drum of the apparatus constructed by Kurnakov, which moved with a certain velocity. In this way it was possible to determine both the transformation mechanism and its kinetics. It was found that cementite goes over from the magnetic to the non-magnetic state at 210° . The work contains the representation of the dilatometric and magnetometric recordings carried out in the course of the heating of "У 8А" steel at a heating velocity of $9^{\circ}/\text{sec.}$, by which the theories mentioned are confirmed. The method recommended here is called the differential-dilatometric method in order to distinguish it from the already previously suggested dilatometric method according to Gridnev and Kocherzhinskiy. There are 2 figures.

ASSOCIATION: Zhdanov Metallurgical Institute (Zhdanovskiy metallurgicheskiy zavod).

AVAILABLE: Library of Congress

Card 2/2 1. Metallurgy 2. Polymorphism-Transformations

FOUO, G. T.

Changing the Mechanical Properties of High-Carbon Steels by the Method of
Rapid Heating for Quench-Hardening

Povsheniye iznosostoykosti i sroka sluzhby mashin. t. 2 (Increasing the Wear
Resistance and Extending the Service Life of Machines. v. 2) Kiyev, Izd-vo AN UkrSSR,
1960. 200 p. 3,000 copies printed. (Series: Its: Trudy, t. 2)

Sponsoring Agency: Vsesoyuznoye nauchno-tekhnicheskoye obshchestvo mashinostroitel'
noy promyshlennosti. Tsentral'noye i Kiyevskoye oblastnoye pravleniya. Institut
mekhaniki AN UkrSSR.

Editorial Board: Resp. Ed.: B.D. Grozin; Deputy Resp. Ed.: L. A. Draggor;
M. I. Braun, I. D. Paynerman, I. V. Kragel'skiy; Scientific Secretary:
M. L. Barabash; Ed. of v. 2: Ta. A. Savokhvalov; Tech. Ed.: N. V. Rakhlina.

COVERAGE: The collection contains papers presented at the Third Scientific
Technical Conference held in Kiyev in September 1957 on problems of increasing
the wear resistance and extending the service life of machines. The conference
was sponsored by the Institut stroitel'noy mekhaniki AN UkrSSR (Institute of
Structural Mechanics of the Academy of Sciences Ukrainian S R), and by the
Kiyevskaya oblastnaya organizatsiya nauchno-tekhnicheskogo obshchestva mashinostroitel'
noy promyshlennosti (Kiyev Regional Organization of the Scientific Technical Society of
the Machine-Building Industry).

18.8100

AUTHOR: Fomin, G. T.

67729

SOV/126-7-3-36/44

TITLE: Stability of Cementite on Heating (Stoikost' tsementita pri nagrevanii)

PERIODICAL: Fizika metallov i metallovedeniye, Vol 7, Nr 3, pp 467-469 (USSR)

ABSTRACT: Slightly Abridged Translation.

1. Cementite was obtained by dissolving filings of steel U12A in a 10% aqueous hydrochloric acid solution at a temperature of -10°C . The residue was washed with cold distilled water, filtered, transferred from the filter into a glass tube and dried at first at 100°C , and subsequently at 250°C for two hours. A chemical analysis of the cementite powder obtained showed that it contained 6.62% C.

The resistance of cementite to heating was studied by the following methods: (1) simultaneous plotting of thermal and magneto-thermal curves; (2) simultaneous plotting of dilatometric and magnetometric curves, and (3) study of the microstructure.

Card 1/6

67729

Stability of Cementite on Heating

SOV/126-7-3-36/44

In the investigation by the first method the cementite powder was transferred to a quartz tube, one end of which was sealed; and in the second method it was placed in the dilatometer tube.

A chromel-alumel thermocouple was used for plotting thermal curves. A spiral made of Nichrome wire, 0.5 mm diameter, wound on the quartz tube containing the specimen, was used as the transmitting element for registering the magnetometric curves. The thermocouple and the Nichrome spiral were connected to an oscillograph. The above curves were registered on photographic paper fixed to a revolving drum.

Specimens made of cementite powder were heated in an electric tube furnace. During heating alternating current forms in the Nichrome spiral, the amplitude of which will change only with change in magnetic properties of the specimen. By registering the sine curve for the change in amplitude of the alternating current in the Nichrome spiral the magnetic changes in the material investigated can be judged and hence the transformations in it. The results

Card 2/6

4

67729

Stability of Cementite on Heating

SOV/126-7-3-36/44

of the experiments show that such a method is sensitive to very slight changes in the magnetic properties of the materials studied. In this work the changes in amplitude of the alternating current are shown as two continuous curves going through the upper and lower amplitude points.

2. In the investigation involving simultaneous registration of the thermal and magnetometric curves, the specimen made from cementite powder was heated successively to 300, 400, 500, 600, 700, 800 and 910°C, held at each temperature for 1.5 hours and then furnace cooled to room temperature. The thermal and magnetometric curves of all heat treatments of cementite up to 800°C inclusive did not show any changes in the cementite. Fig.1 shows the thermal and magnetometric heating curves for the specimen up to 910°C and soaking at that temperature for 1.5 hours, whilst the cooling curves after this heat treatment are shown in Fig.2. The magnetometric curve in Fig.1 shows the same picture as on heating to lower temperatures.

Card 3/6

4

67729

Stability of Cementite on Heating

SOV/126-7-3-36/44

3. In the study of the stability of cementite by the dilatometric and magnetometric method the specimen was heated successively to 520, 620, 720, 840, 900 and 1000°C, held at each temperature for approximately 1.5 hours, and furnace-cooled to room temperature after each soaking. A simple, not a differential dilatometer, was used.

The dilatometric and magnetometric curves of all heat treatments up to 840°C inclusive are identical and do not exhibit any changes in the heated material. The dilatometric curve is a straight line, and the magnetometric curve shows the change of cementite from the magnetic to the non-magnetic state at 210°C.

On heating to 900°C and holding at that temperature for 11 minutes, the dilatometric curve shows that the specimen length does not change. However, as the soaking time is increased the specimen length gradually decreases. A repeated heating to 900°C and holding for 30 minutes shows that, as a result of the first heating at 900°C, the specimen had become weakly magnetic at temperatures ranging from room temperature to 720°C and the dilatometric curve for

Card 4/6

57729

Stability of Cementite on Heating

SOV/126-7-3-36/44

this heat treatment is essentially the same as described above.

In Fig.3 curves for the third heat treatment of the specimens, to 900°C and soaking for 32 minutes at that temperature, are shown.

In Fig.4 the magnetometric and dilatometric curves for the heating of the specimen to 1000°C are shown. In this figure the dilatometric cooling curve for the specimen is also shown. The dilatometric heating curve shows the same characteristics as that obtained for heating to 900°C (see Fig.3). The difference is only that the absolute elongation of the specimen on heating to 650°C in the curve of Fig.4 is greater than that in the curve of Fig.3.

The results of the investigation show that isolated cementite is stable up to 900°C, but above that temperature decomposes into austenite and graphite at a rate which is the greater, the higher the temperature. ✓

Card 5/6

67729

Stability of Cementite on Heating

SOV/126-7-3-36/44

There are 4 figures.

ASSOCIATION: Zhdanovskiy metallurgicheskiy institut (Zhdanov
Metallurgical Institute)

SUBMITTED: May 14, 1957

4

Card 6/6

25729

S/123/61/000/012/013/042

A004/A101

11710

AUTHOR: Fomin, G. T.

TITLE: Increasing the resistance to wear and the service life of parts having a large cross section by the surface hardening method with accelerated heating in the furnace

PERIODICAL: Referativnyy zhurnal, Mashinostroyeniye, no. 12, 1961, 81, abstract 12B577 (V sb. "Povysheniye iznosostoykosti i sroka sluzhby mashin. v. 2". Kiyev, AN UkrSSR, 1960, 57-69)

TEXT: The author recommends hardening with accelerated heating in furnaces, which transforms only the surface layer of a certain thickness into the austenitic state, for all parts not requiring through-hardening or having a large cross section which exceeds the hardenability of the steel. Such a heating method makes it possible to intensify the heat-treatment process of parts with a cross section of from 40 mm and more, to considerably reduce or fully prevent the surface oxidation and decarburization, reduce the allowance for mechanical working after hardening, considerably reduce the labor-consuming mechanical working of the hardened steel, and to lower the part manufacturing costs. X

Card 1/2

25729

S/123/61/000/012/013/042

A004/A101

Increasing the resistance to wear ...

Hardening transforming only the surface layer into the austenitic state causes less inner stresses and, consequently, reduces the probability of cracks forming in the metal. Solid parts subjected to accelerated heating prior to hardening obtain a high hardness and resistance to wear of the hardened surface layer. Moreover, the structure of the middle layers of the cross section do not change and maintain the necessary strength and toughness. There are 7 figures and 11 references.

N. Il'ina

[Abstracter's note: Complete translation]

Card 2/2

11710

25730

S/123/61/000/012/014/042
A004/A101

AUTHOR: Fomin, G. T.

TITLE: Changing the mechanical properties of high-carbon steels by the accelerated heating method prior to hardening

PERIODICAL: Referativnyy zhurnal, Mashinostroyeniye, no. 12, 1961, 81, abstract 12B578 (V sb. "Povysheniye iznosostoykosti i sroka sluzhby mashin. v. 2". Kiyev, AN UkrSSR, 1960, 165-171)

TEXT: By increasing the heating rate in the furnace it is possible to change, within a wide range, the mechanical properties of hardened high-carbon steels and obtain the desired combination of hardness, strength and toughness. With an accelerated heating in the furnace prior to hardening and subsequent low-temperature tempering of the hardened steel, it is possible to obtain a higher surface hardness and toughness than after the ordinary hardening with subsequent medium- or high-temperature tempering. High mechanical properties of high-carbon steel hardened with accelerated heating and subjected to low-temperature tempering are obtained under the condition that its structure consists of cryptocrystalline martensite with inclusions of fine and evenly distributed

Card 1/2

Changing the mechanical properties ...

25730
S/123/61/000/012/014/042
A004/A101

cementite particles. The author recommends to introduce the accelerated heating in the furnace prior to hardening for the steel grades Y7 (U7), Y10 (U10) and 9XC (9KhS), this process being more efficient and economical and ensuring less oxidation and decarburization in the metal surface layer of the part than the ordinary heating process. There are 4 figures and 11 references.

N. Il'ina

[Abstracter's note: Complete translation]

Card 2/2

SALANOV, V.I.; POMIN, G.V.

Organogenesis in corn and selection of pairs for hybridization.
Nauch. dokl. vys. shkoly; biol. nauki no. 1:189-194 '61.

(MIRA 14:2)

1. Rekomendovana kafedroy selektsii i semenovodstva Kuybyshevskogo
sel'skokhozyaystvennogo instituta.
(CORN BREEDING)

FOMIN, G.V.

Morphological and physiological analysis in corn breeding.
Nauch. dokl. vys. shkoly; biol. nauki no. 2:171-174 '64.
(MIRA 17:5)

1. Rekomendovana kafedroy selektsii i semenovodstva Kuybyshevskogo
sel'skokhozyaystvennogo instituta.

_FOMIN, G.V.; BLYUMENFEL'D, L.A.; SUKHORUKOV, B.I.

Electron-donor properties of the hydroxyl ion. Dokl. AN
SSSR 157 no.5:1199-1201 Ag '64. (MIRA 17:9)

1. Institut khimicheskoy fiziki AN SSSR. Predstavleno
akademikom M.I. Kabachnikovym.

FOMIN, G.V.

Laying city gas lines in winter. Stroi. truboprov. 9 no.6:
21-22 Je '64. (MIRA 17:12)

1. Spetsializirovannoye stroitel'no-montazhnoye upravleniye
tresta Rosgazstroy, Ivanovo.

CHETVERIKOV, A.G.; BLYUMENFEL'D, L.A.; FOMIN, G.V.

Possible mechanisms of the appearance and destruction of free radical states in cells. Biofizika 10 no.3:476-486 '65.
(MIRA 18:11)

1. Institut khimicheskoy fiziki AN SSSR, Moskva. Submitted Dec. 11, 1964.

FOMIN, G.Yaa; VASENINA, N.I., red.; ISHKOVA, A.K., red.; EL'KINA, E.M.,
tekhn. red.; GROMOV, A.S., tekhn. red.

[Work and wages in state commerce] Trud i zarabotnaia plata v gosudarstvennoi torgovle; sbornik rukovodiashchikh materialov. Izd.2.,
perer. Pod red. N.I.Vasenina. Moskva, Gos. izd-vo torg. lit-ry,
1961. 335 p. (MIRA 14:11)

(Wages--Commerce)

FOMIN, G.Ya.

[Labor and wages in Commerce] Trud i zarabotnaia plata v
torgovle; sbornik rukovodiashchikh materialov. Sost. G.IA.
Fomin. Moskva, Gos. izd-vo torgovoi lit-ry, 1959. 277 p.
(MIRA 15:1)

(Wages and labor productivity) (Russia--Commerce)

FOKIN, Georgiy Yakovlevich; VASENIN . N.I., red.; IL'YUSHIN,
A.P., red.

[Work and wages in state commerce; collection of
regulatory materials] Trud i zarabotnaya plata v gos-
darstvennoi torgovle; sbornik rukovodivshchikh materialov.
Izd.3., perer. Moskva, Ekonomika, 1964. 302 p.

(MIRA 17:8)

FOMIN, I.

PM 236725

USSR/Electronics - Radiofication

Wired Radio Centers

Jun 52

"The Equipment of KRU-2 Wired Radio Centers Should Be Improved," I. Fomin, Senior Technician, Khvalynskiy Wired Radio Center, Saratov Oblast

"Radio" No 6, p 20

The arrangement for charging the batteries of the KRU-2 wired radio center from the ac line is inefficient because the voltage of kolhoz power lines varies from 160-230 v and the selenium rectifier cannot charge the storage batteries when the voltage

drops to 160 v. Suggests that primary of power transformer be divided into sections and tapped so that voltage applied to selenium rectifier can be held constant.

236725

FOMIN, I., master proizvodstvennogo obucheniya

At industrial practice. Prof.-tekh. obr. 19 no.6:17-18
Je '62.

(MIRA 15:7)

1. Stroitel'noye uchilishche No.4, Astrakhan'.
(Moscow--Building trades--Study and teaching)

ACCESSION NR: AP4012554

S/0056/64/046/001/0270/0272

AUTHOR: Fomin, I. A.

TITLE: Regge poles in the problem of the quasiclassical potential well at energies below the bottom of the well

SOURCE: Zhurnal eksper. i teoret. fiz., v. 46, no. 1, 1964, 270-272

TOPIC TAGS: Regge poles, quasiclassical potential well problem, Regge pole location, physical series of poles, unphysical series of poles, Regge pole collision, Regge pole collision point

ABSTRACT: The method developed by A. Z. Patashinskiy, V. L. Pokrovskiy, and I. M. Khalatnikov (ZhETF v. 44, 2062, 1963) for the analysis of the location and motion of Regge poles in the case of a quasiclassical rectangular potential well is extended to include the unphysical series of poles for energies below the bottom of the well. It is shown that in the latter case the poles, which lie on the real

Card 1/2

ACCESSION NR: AP4012554

axis in pairs, move towards each other, collide, and go out into the complex domain. The positions of the collision points are found and a formula is obtained for the behavior of the poles as the energy $E \rightarrow -\infty$. The formula derived is analogous to that obtained by C. G. Bollini and J. J. Giambiagi (Nuovo Cim. v. 28, 356, 1963) by a different method, except that the latter contains an incorrect factor in the second term. "The author is grateful to I. M. Khalatnikov, A. Z. Patashinskiy, and V. L. Pokrovskiy for suggesting the problem and for numerous useful discussions." Orig. art. has: 1 figure and 6 formulas.

ASSOCIATION: Moskovskiy fiziko-tekhnicheskii institut (Moscow Physicotechnical Institute)

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Card 2/2

Font, I.A.

How we organize the overhaul operations of automatic block systems. Avtom., telem. i sviaz' 9 no.5:36-37 My '65.

(MIRA 18:t)

1. Zamestitel' nachal'nika Kuzinskoy distantsii Sverdlovskoy dorogi.

FOMIN, I.F., inzhener.

Gripping devices for SIF-0,15 crane-type hay stackers. Sel'khoz-
mashina no.7:8-10 J1 '54. (MLRA 7:7)
(Agricultural machinery)

LIVSHITS, Sh.Ya., inzhener, redaktor; POMIN, I.V., inzhener, redaktor
izdatel'stva; TIKHANOV, A.Ya., tekhnicheskii redaktor

[Plans for the modernization of knee and column milling machines, series DZFS models 680M, 610G and series GZFS models 680M, 610G, 680U, 610B, 680D, 680, 610M, 610V, 610, 610D] Tipovoi proekt modernizatsii konsol'no-frezernykh stankov vypuska DZFS modeli 680M, 610G i vypuska GZFS modeli 680M, 610G, 680U, 610B, 680D, 680, 610M, 610V, 610, 610D. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry 1957. 111 p. (MLRA 10:6)

1. Dmitrovskiy zavod frezernykh stankov. 2. Otdel modernizatsii i remonta stankov Eksperimental'nogo nauchno-issledovatel'skogo instituta metalloreshushchikh stankov (for Livshits)
(Milling machines)

FOMIN, I. Ya.

Mbr., Sci. Res. Inst. for Mechanical Processing of Metals, -cl948-

Cand. Technical Sci.

"Estimate of the concentration of coal," Stal', No. 5, 1948

21

CA FOMIN, I. Ya.

Evaluation of the property of coal to be beneficiated
 I. Ya. Fomin, *Dokl. Akad. Nauk SSSR* 1974, 234, 1018-1021. For evaluation of
 this property is suggested the resultant of 3 indexes: (a) a
 theoretical index (K_t) obtained from the results of a lab
 gravity analysis; (b) a practical index (K_p) or the index
 of beneficiation actually obtained with industrial equip-
 ment, and (c) efficiency index (η) of app. or process.
 $K_t = \gamma(a - d_0)/a(100 - a)$, where γ is the yield of con-
 centrate when coal is beneficiated in heavy liquids, d_0 the
 ash content of the concentrate, and a is the ash content
 of the original coal. $K_p = \gamma_p(a - d_p)/a(100 - a)$,
 where the meaning of the symbols is analogous to the pre-
 ceding, subscript p indicates that they are obtained in in-
 dustrial app. $\eta = K_p/K_t$. The application of this
 method of evaluation is discussed. M. Haseh,

CA FOMIN, I. Ya.

7

Means for improving the dressing of manganese ores.
1. Ya. Fomin. *Gornyi Zhur.* 123, No. 3, 28-32 (1951).
Among the recommended improvements is the substitution
of washing towers for launders. In the towers the ore is
thoroughly soaked, thereby facilitating the sepn. of ore and
gang. and preventing comminution of ore by attrition.
Concn. in heavy suspensions is recommended in preference
to jigging. Several schemes for concg. fines are outlined
M. Hosh

LIVSHITS, Pavel Yuri'yevich; FOMIN, Kirill Aleksandrovich; SEMENENKO, P.A.,
red., inzh.; FREGER, D.P., tekhn.red.

[Knurling convex numerical symbols on steel disks; the practice
of the "Svoboda" Plant in Leningrad] Nakatyvanie vypuklykh
tsifrovyykh znakov na stal'nykh diskakh; opyt Leningradskogo
zavoda "Svoboda." Leningrad, 1956. 10 p. (Leningradskii dom
nauchno-tekhnicheskoi propagandy. Informatsionno-tekhnicheskii
listok, no.42. Mekhanicheskaya obrabotka metallov) (MIRA 10:12)
(Marking devices)

25(1)

PHASE I BOOK EXPLOITATION

SCV/1755

Fomin, Kirill Alekseyevich, Lathe Operator

Skorostnoye narezaniye rez'b na tokarno-vintoreznom stanke s primeneniye rez'boukazatelya (High-speed Threading With Turning Lathe Using Thread Chasing Dial) Kuybyshev/ Kuybyshevskoye knizhnoye izd-vo, 1956. 24 p. (Series: Novoye v tekhnike) 3,000 copies printed.

Ed.: P.S. Kulikov; Tech. Ed.: S.I. Kosykh.

PURPOSE: The purpose of this booklet is to acquaint lathe operators with the modern thread-cutting techniques.

COVERAGE: In this booklet the author describes a new high-speed thread-cutting technique. He criticizes existing methods and proposes a more efficient method of thread cutting which involves the use of a thread chasing dial. A description is given of the universal thread chasing dial with interchangeable gears which enables

Card 1/2

High-speed Threading (Cont.)

SOV/1755

rapid and efficient cutting of metric thread of different sizes. There are several explanatory drawings and diagrams. The author was assisted by Candidate of Technical Sciences M.Ya. Tsiaf in preparing the booklet. There are no references.

TABLE OF CONTENTS:

Operational Principles of the Thread Chasing Dial	4
Kinematic Calculations	11
Thread Chasing Dial Model MK-199	19
Geometry of the Cutting Tool and the Cutting Regime	29
AVAILABLE: Library of Congress (TJ1222.F6)	

Card 2/2

GO/jab
6/18/59

AKH, I. I.

KARSHENKO, A. V. jt. m. a guide to the conline "Stalinizm-6" A. izd. Moskva,
Gos. izd-vo sel'khoz. lit-ry, 1954. 221 p. (55-2942%)

TJ1436.76 1954

Мот. с. 1.

KS-10 self-propelled mower Moskva, Gos. izd-vo sel'khoz. lit-ry, 1954. 883 p. (54-43472)

S695.76

FOMIN, Ivan Ivanovich; **KRASNICENKO**, Aleksandr Vasil'yevich, laureat
Stalinskoy premii; **KRYUKOV**, V.L., redaktor; **PEVNER**, V.I., tekhnicheskii redaktor

[Manual for the "Stalinets-6" combine] Rukovodstvo po kombinu
"Stalinets-6." Izd. 3-e, ispr. Moskva, Gos. izd-vo selkhoz. lit-ry,
1956. 217 p. (MIRA 9:11)

1. ^{for Fomin} Zamestitel' nachal'nika Spetsial'nogo konstruktorskogo byuro (for
Fomin) 2. ^{for Krasnichenko} Direktor Vsesoyuznogo Nauchno-issledovatel'skogo instituta
sel'skokhozyaystvennogo mashinostroyeniya (for Krasnichenko)
(Combines (Agricultural machinery))

Dist. 2200
movement to production technology of auto-1000
... 51. 1987

AUTHOR: Fomin, I.I., Zaitseva, A.D. and Konshin, P.P., Engineers²³⁴
at the Serp i Molot Works.

TITLE: Improving the production technology of free-cutting steel
(Uluchshenie tekhnologii proizvodstva avtomatnoy stali.)

PERIODICAL: "Metallurg" (Metallurgist),
1957, No. 1, pp. 15 - 16, (U.S.S.R.)

ABSTRACT: Existing practice at the Serp i Molot Works for the
production of type A12 free-cutting steel (0.08 - 0.16% C,
0.60 - 0.90% Mn, 0.15 - 0.35% Si, 0.08 - 0.20% S and
0.08 - 0.15% P) was found to be capable of improvement.
Measures required are:
1) strict control of filling rate for all moulds to give
filling times over 3 minutes;
2) introduction of sulphur into the ladle in a metal container;
3) maintenance of the Mn/S ratio at a value not less than 7.5;
4) exclusion of heats with low carbon contents on melting;
5) fullest possible deoxidation, preferably by preliminary
deoxidation of the bath with blast furnace ferrosilicon
(7-10 kg/ton of metallic charge, depending on quality of
silicon-manganese introduced. 1 table.

*1.2 mod "Serp i molot"
(Steel - metallurgy)*